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Notice of Allowability	Application No.	Applicant(s)	
	09/818,912	TAMURA, KOICHI	
	Examiner	Art Unit	
	Phuong Phu	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/27/05.
2. ☒ The allowed claim(s) is/are 1-22.
3. ☒ The drawings filed on 28 March 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>11/5/04</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

This Office Action is responsive to the Amendment filed on 1/17/05.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney Frederick Cooperidder on 3/1/05.

The application has been amended as follows:

IN THE CLAIMS:

-Claim 1 is replaced with the following claim:

1. (Currently amended) A Code Division Multiple Access (CDMA) demodulation circuit comprising:

delay profile calculating means for calculating delay profiles of received signals;

path assigning means for assigning path locations to a plurality of fingers based on a calculation result obtained in said delay profile calculating means, the plurality of fingers to which the path locations being assigned by said path assigning means, the fingers de-spreading the assigned paths;

rake combining means for combining outputs of said plurality of fingers; and

reception controlling means that estimates a drop cycle of a reception level by measuring an amount of a reception level combined by said rake combining means and comparing said

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amount to a threshold and that reduces a degradation in receiving characteristics using an estimation result.

-Claim 8 is replaced with the following claim:

8. (Currently amended) A Code Division Multiple Access (CDMA) demodulation method for a CDMA demodulation circuit comprising delay profile calculating means for calculating delay profiles of received signals, path assigning means for assigning path locations to a plurality of fingers based on the calculation result obtained in said delay profile calculating means, the plurality of fingers to which the path locations being assigned by said path assigning means, the fingers de-spreading the assigned paths, and rake combining means for combining outputs of the plurality of fingers, wherein the CDMA demodulation method comprises:

estimating a drop cycle of a reception level from by measuring an amount of a reception level combined by said rake combining means and comparing said amount to a threshold to reduce a degradation in receiving characteristics using an estimation result.

-Claim 21 is replaced with the following claim:

21. (Currently amended) A Code Division Multiple Access (CDMA) demodulation circuit comprising:

a delay profile calculator that calculates delay profiles of received signals;
a path assigning module that assigns path locations to a plurality of fingers based said delay profiles, the plurality of fingers to which the path locations being assigned by said path assigning module, the fingers de-spreading the assigned paths;
a rake combiner that combines outputs of said plurality of fingers; and

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a reception controller that calculates an estimate for a future reception level drop cycle from a reception level combined by said rake combiner, said estimate being used to reduce a degradation in receiving characteristics of said CDMA demodulation circuit before said reception level actually drops, said estimate being calculated by measuring an amount of a reception level combined by said rake combiner and comparing said amount to a threshold.

-Claim 22 is replaced with the following claim:

22. (Currently amended) A Code Division Multiple Access (;CDMA) demodulation method comprising:

estimating a future drop cycle of a reception level due to fading by measuring an amount of a reception level and comparing said amount to a threshold; and

applying said future drop cycle estimate to reduce degradation in receiving characteristics before said reception level actually drops.

REASONS FOR ALLOWANCE

2. Claims 1-22 are allowed.

3. The following is an examiner's statement of reasons for allowance:

References (5999560), (6272167), (6795422), (20030026233), (6157687) and (6813309) are additional cited because they are pertinent to the claimed invention.

Regarding to independent claims 1, 8, 21 and 22, none of prior art of record teaches or suggests the invention as claimed. Reference Condo (6,178,193), previous cited, teaches the claimed invention except he fails to teach that a drop cycle of a reception level is estimated by measuring an amount of a reception level and comparing said amount to a threshold. It would

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not have been obvious for a person skilled in the art to implement Condo, in view other prior art of record, in order to make such implementation leading to the claimed invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. The applicant is hereby also notified that regarding to the IDS filed on 11/5/04, reference "European Search Report dated September 28, 2004", listed under section "OTHER DOCUMENTS" of Form PTO-1449, has been considered by the examiner, but it is not initialed by the examiner because it is not considered as a prior art.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Phu whose telephone number is 571-272-3009. The examiner can normally be reached on M-F (6:30-2:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Phuong phu

Phuong Phu
03/04/05

**PHUONG PHU
PRIMARY EXAMINER**

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Primary Examiner
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